

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A data protection processing device that encrypts a bit stream for a protection of data security, the bit stream including a first byte, M second bytes, and N intermediate bytes between the first byte and the M second bytes, where M and N are positive integers, the data protection processing device comprising:

a determination unit that determines whether the first byte indicates a first value; and  
a calculation unit that performs, ~~using a second value,~~ an arithmetic operation on the M second bytes using a second value without performing the arithmetic operation on the N intermediate bytes, when the determination unit determines that the first byte indicates the first value.

2. (Previously Presented) The data protection processing device according to claim 1, wherein the arithmetic operation is an addition or a subtraction to set a most significant bit of each of the M second bytes to 1.

3. (Currently Amended) The data protection processing device according to claim 1, wherein the first value, the second value, the M and the N are stored in the data protection processing device, and are able to be rewritten from the outside.

4. (Currently Amended) The data protection processing device according to claim 1, further comprising:

a first buffer that temporarily stores a plurality of bytes to be read out by the determining unit, each of the plurality of bytes ~~being obtained from~~ consisting of a predetermined number of bits in the bit stream ~~by bit to byte conversion;~~ and

a second buffer that temporarily stores the first byte, the N intermediate bytes, and the M second bytes that have been subjected to the arithmetic operation.

5.-6. (Cancelled).

7. (Currently Amended) The data protection processing device according to claim 1, further comprising:

a receiving unit that receives, from another data protection processing device, another bit stream including a third byte, M fourth bytes, and N intermediate bytes between the third byte and the M fourth bytes;

a second determination unit that determines whether the third byte indicates the first value; and

a second calculation unit that performs, ~~using the second value~~, a second arithmetic operation on the M fourth bytes using the second value without performing the second arithmetic operation on the N intermediate bytes, when the second determination unit determines that the third byte indicates the first value.

8.-12. (Cancelled)

13. (Currently Amended) A data communications system comprising:

a data transmitting device that encrypts a bit stream for a protection of data security, the bit stream including a first byte, M second bytes, and N intermediate bytes between the first byte and the M second bytes, where M and N are positive integers; and

a data receiving device that receives an encrypted bit stream from the data transmitting device,

wherein the data transmitting device includes

a first determination unit that determines whether the first byte indicates a first value; and

a first calculation unit that performs, ~~using a second value~~, a first arithmetic operation on the M second bytes using a second value without performing the first arithmetic operation on the N intermediate bytes, when the first determination unit determines that the first byte indicates the first value, and

wherein the data receiving device includes

a second determination unit that determines whether the first byte indicates the first value; and

a second calculation unit that performs, ~~using the second value~~, a second arithmetic operation on the M second bytes using the second value without performing the second arithmetic operation on the N intermediate bytes, when the second determination unit determines that the first byte indicates the first value.

14. (Cancelled)

15. (Previously Presented) The data communications system according to claim 13, wherein

the first arithmetic operation is an addition or a subtraction to set a most significant bit of each of the M second bytes to 1, and

the second arithmetic operation is an addition when the first arithmetic operation is the subtraction, and a subtraction when the first arithmetic operation is the addition.

16. (Currently Amended) The data communications system according to claim 13, wherein

the first value, the second value, the M and the N are stored in each of the data transmitting device and the data receiving device, and are able to be rewritten from the outside.

17. (Currently Amended) A data protection processing method of encrypting a bit stream for a protection of data security, the bit stream including a first byte, M second bytes, and N intermediate bytes between the first byte and the M second bytes, where M and N are positive integers, the data protection processing method comprising:

determining whether the first byte indicates a first value; and

performing, ~~using a second value,~~ an arithmetic operation on the M second bytes using a second value without performing the arithmetic operation on the N intermediate bytes, when it is determined at the determining that the first byte indicates the first value.

18. (Previously Presented) The data protection processing method according to claim 17, wherein the arithmetic operation is an addition or a subtraction to set a most significant bit of each of the M second bytes to 1.

19. (Currently Amended) The data protection processing method according to claim 17, wherein the first value, the second value, the M and the N are stored in a rewritable memory, and are able to be rewritten from the outside.

20. (Currently Amended) The data protection processing method according to claim 17, further comprising:

temporarily storing, in a first buffer, a plurality of bytes to be read out at the determining, each of the bytes being obtained from consisting of a predetermined number of bits in the bit stream ~~by bit-to-byte conversion;~~ and

temporarily storing, in a second buffer, the first byte, the N intermediate bytes, and the M second bytes that have been subjected to the arithmetic operation.

21.-25. (Cancelled)

26. (Currently Amended) The data protection processing method according to claim 17, further comprising:

receiving another bit stream including a third byte, M fourth bytes, and N intermediate bytes between the third byte and the M fourth bytes;

determining whether the third byte indicates the first value; and

performing, ~~using the second value~~, a second arithmetic operation on the M fourth bytes using the second value without performing the second arithmetic operation on the N intermediate bytes, when it is determined at the determining that the third byte indicates the first value.

27.-34. (Cancelled)

35. (Currently Amended) The data protection processing device according to claim 1, wherein, when the first byte indicates the first value, the M second bytes correspond to an adding range, the ~~first byte corresponds~~ N intermediate bytes correspond to an adding condition, and the second value corresponds to a protection key value.

36. (Currently Amended) The data protection processing method according to claim 17, wherein, when the first byte indicates the first value, the M second bytes correspond to an adding range, the ~~first byte corresponds~~ N intermediate bytes correspond to an adding condition, and the second value corresponds to a protection key value.

37. – 40. (Canceled).